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EXAMINER

COBANOGLU, DILEK B

ART UNIT	PAPER NUMBER
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3626

NOTIFICATION DATE	DELIVERY MODE
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02/29/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 09/995,456	Applicant(s) MCLAUGHLIN, RICHARD P.	
	Examiner DILEK B. COBANOGLU	Art Unit 3626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/25/02, 4/18/02, 2/7/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Notice to Applicant

1. This communication is in response to the amendment received on 11/16/2007. Claims 1-44 remain pending in this application.

Specification

2. The amendment filed 05/22/2007 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "transforming the data in the first and second tables to corresponding first and second discrepancies" within claims 22, 23, 30, 34 and 40. In particular, Applicant does not point to, nor was the Examiner able to find, any support for a "transforming the data in the first and second tables to corresponding first and second discrepancies". As such, Applicant is requested to clarify the above issues and to specifically point out support for the newly added limitations in the originally filed specification and claims.

3. Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 22, 23, 30, 34 and 40 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention and for the reasons set forth in the objection to the specification above. In particular, the newly added limitation “transforming the data in the first and second tables to corresponding first and second discrepancies” was not described in the specification as originally filed.

6. Independent claims 22, 30 and 34 recite limitations that are new matter, as discussed above.

7. Claims 23-29, 31-44 incorporate the deficiencies of independent claims 22, 30 and 34, through dependency, and are also rejected.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

9. Claims 22-44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. Independent claims 22, 30, 34 and 40 have been amended now to recite “transforming the data in the first and second tables to corresponding first and second discrepancies”; there is no specific description of this newly added limitation in the specification; it is not clear which data in the tables are transformed from the tables and to where.

B. Claims 23-29, 31-33, 35-39 and 41-44 are dependent to claim 30, and follows the same limitations, therefore they are rejected under 35 U.S.C. 112, second paragraph with the same reasons described above and incorporated herein.

C. The amended claim 30 discloses “planning an orthodontic treatment based upon the crowding/spacing data entered into the first and second tables and the first and second discrepancies”. It is not clear how the planning process occurs on the claim. Is the planning to figure out the distance and direction required to move each tooth, or only finding out the existing space between the teeth and the midline. Also, in the following claims, it’s disclosed that summing the crowding/spacing data of the first and second tables and then summing these totals, so creating first and second initial discrepancies; entering other created space such as extractions, stripping, expansion and distalizing, then adding these values with the first and second totals to create first and second remaining discrepancies. It is not clear how and for what these discrepancies are used. It’s not clear what the obtained values are for and how they are to be used.

D. Claims 31-44 are dependent to claim 30, and follows the same limitations, therefore they are rejected under 35 U.S.C. 112, second paragraph with the same reasons described above and incorporated herein.

Claim Rejections - 35 USC § 101

10. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. Claims 1-44 are rejected under 35 U.S.C. 101 because these claims do not produce tangible and useful results.

A. Claims 1, 14 and 22 disclose “a computer implemented method of developing an orthodontic treatment comprising: entering crowding/spacing data, curve of spee data and incisor position data into first and second tables, and summing the first and second data and obtaining a first and second total”. The amended claims 22 and 30 disclose “entering midline and molar relationship into a midline chart; entering first to sixth crowding spacing data into a discrepancy chart having first and second tables; transforming the data in the first and second tables to corresponding first and second discrepancies; and entering data from the first and second tables into an anticipated treatment chart”. This is not a tangible and useful result. At the end of summing these data one can obtain a number for each table, and this is not a tangible and useful data for any treatment. Also, it's not clear what these numbers represent and how they are to be used.

B. Claims 2-13, 15-21 and 31-44 are dependent claims and disclose the same limitations, therefore they're rejected under 35 U.S.C. 101 with the same reasons as described above.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1-44 are rejected under 35 U.S.C. 102(b) as being unpatentable by Andreiko et al. (hereinafter Andreiko) (U. S. Patent No. 5,447,432).

A. Claim 1 has been amended now to recite a computer implemented method of developing an orthodontic treatment comprising:

- i. entering first crowding/spacing data in first and second tables, wherein the first table relates to cuspid to midline regions of a patient's jaw, wherein the second table relates to second molar to midline regions of the patient's jaw, and wherein the first crowding/spacing data relates to the right and left cuspid to midline regions of the patient's jaw (Andreiko; col. 12, lines 18-32, col. 13, lines 53-68, col. 37, lines 5-18 and Fig. 4);
- ii. entering second crowding/spacing data in the second table but not the first table, wherein the second crowding/spacing data relates to bicuspid regions of the patient's jaw (Andreiko; col. 17, lines 40-59);
- iii. entering third crowding/spacing data in the second table but not the first table, wherein the third crowding/spacing data relates to molar regions of the patient's jaw (Andreiko; col. 17, lines 40-59);
- iv. entering curve of Spee spacing data in the first and second tables, wherein the curve of Spee spacing data relates to space required to correct a curve of Spee of the patient's jaw (Andreiko; col. 15, line 53 to col. 16, lines 4);

- v. entering midline spacing data in the first and second tables, wherein the midline spacing data relates to space created and required to move a midline of teeth in the patient's jaw (Andreiko; col. 37, lines 19-35);
- vi. entering incisor position data in the first and second tables, wherein the incisor position data relates to space required to correct positions of incisors in the patient's jaw (Andreiko; col. 17, lines 40-59);
- vii. creating for the first table but not the second table a first total by summing the first crowding/spacing data, the curve of Spee spacing data, the midline spacing data, and the incisor position data (Andreiko; col. 37, lines 19-51 and col. 39, lines 53-55); and,
- viii. creating for the second table but not the first table a second total by summing the first crowding/spacing data, the second crowding/spacing data, the third crowding/spacing data, the curve of Spee spacing data, the midline spacing data, and the incisor position data (Andreiko; col. 40, lines 2-18 and line 65 to col. 41, lines 15).

B. As per claim 2, Andreiko discloses the method of claim 1 further comprising adding other created space to at least one of the first and second totals (Andreiko; col. 14, lines 25-35).

C. As per claim 3, Andreiko discloses the method of claim 2 wherein the other created space comprises space created by extractions (Andreiko; col. 14, lines 25-35).

D. As per claim 4, Andreiko discloses the method of claim 2 wherein the other created space comprises space created by stripping (Andreiko; col. 12, lines 46-64).

E. As per claim 5, Andreiko discloses the method of claim 4 wherein the other created space comprises space created by expansion (Andreiko; col. 5, lines 13-17).

F. As per claim 6, Andreiko discloses the method of claim 5 whether the other created space comprises space created by distalizing (Andreiko; col. 12, lines 46-64).

G. As per claim 7, Andreiko discloses the method of claim 2 wherein the other created space comprises space created by expansion (Andreiko; col. 5, lines 13-17).

H. As per claim 8, Andreiko discloses the method of claim 7 wherein the other created space comprises space created by distalizing (Andreiko; col. 12, lines 46-64).

I. As per claim 9, Andreiko discloses the method of claim 2 wherein the other created space comprises space created by distalizing (Andreiko; col. 12, lines 46-64).

J. As per claim 10, Andreiko discloses the method of claim 9 wherein the other created space comprises space created by stripping (Andreiko; col. 12, lines 46-64).

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K. As per claim 11, Andreiko discloses the method of claim 1 further comprising entering midline and molar relationships into a midline chart (Andreiko; col. 42, lines 42-68).

L. As per claim 12, Andreiko discloses the method of claim 1 further comprising entering data from the first and second tables into an anticipated treatment chart (Andreiko; col. 44, line 63 to col. 45, line 22).

M. As per claim 13, Andreiko discloses the method of claim 12 further comprising entering midline and molar relationships into a midline chart (Andreiko; col. 42, lines 42-68).

N. As per claim 14, Andreiko discloses a computer implemented method related to orthodontics, which the first part of the claim repeats the same limitations as claim 1, therefore is rejected with the same reasons given above and incorporated herein. Andreiko also discloses a method related to orthodontics comprising:

- i. entering other created space in the first and second tables (Andreiko; col. 14, lines 25-35);
- ii. summing the first total and the other created space to create a third total and entering the third total in the first table as a first remaining discrepancy (Andreiko; col. 40, lines 42-64); and,
- iii. summing the second total and the other created space to create a fourth total and entering the fourth total in the second table as a second remaining discrepancy (Andreiko; col. 40, lines 42-64).

O. Claims 15-21 repeat the same limitations as claims 4-5-6-3-11-12-13 respectively, and therefore are rejected with the same reasons as described above and incorporated herein.

P. Claim 22 has been amended now to recite a computer implemented method related to orthodontics, which the first part of the claim repeats the same limitations as claim 1, therefore is rejected with the same reasons given above and incorporated herein. Andreiko also discloses a method related to orthodontics comprising:

- i. entering midline and molar relationships into a midline chart (Andreiko; col. 42, lines 42-68)
- ii. transforming the data in the first and second tables to corresponding first and second discrepancies (Andreiko; col. 44, line 63 to col. 45, line 22); and,
- ii. entering data from the first and second tables into an anticipated treatment chart (Andreiko; col. 44, line 63 to col. 45, line 22).

Q. Claim 23 has been amended now to recite the method of claim 22 wherein the transforming of the data in the first and second discrepancies comprises summing the data in the first and second tables to create respective first and second totals, entering the first total into the first table as a first discrepancy, and entering the second total into the first table as a second discrepancy (Andreiko; col. 37, lines 19-51, col. 39, lines 53-55 and col. 40, line 65 to col. 41, line 15).

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R. As per claim 24, Andreiko discloses the method of claim 23 wherein the first and second discrepancies comprise first and second initial discrepancies, respectively, and wherein the method further comprises:

- i. entering data related to other created space into the first and second tables (Andreiko; col. 14, lines 25-35);
- ii. summing the first initial discrepancy with the other created space to create a first remaining discrepancy and entering the first remaining discrepancy into the first table (Andreiko; col. 40, lines 42-64); and,
- iii. summing the second initial discrepancy with the other created space to create a second remaining discrepancy and entering the second remaining discrepancy into the second table (Andreiko; col. 40, lines 42-64).

S. Claims 25-29 repeat the same limitations as claims 3-4-5-6-3 respectively, and therefore are rejected with the same reasons as described above and incorporated herein.

T. Claim 30 has been amended now to recite a method related to orthodontics, which the first part of the claim repeats the same limitations as claim 1, therefore is rejected with the same reasons given above and incorporated herein. Andreiko also discloses a method related to orthodontics comprising:

- i. Computer entering crowding/spacing data in a first table, wherein the crowding/spacing data entered into the first table relate only to a

cuspid to midline region of a patient's jaw (Andreiko; col. 12, lines 18-32, col. 13, lines 53-68, col. 37, lines 5-18 and Fig. 4);

ii. Computer entering crowding/spacing data in a second table, wherein the crowding/spacing data entered into the second table relate to a second molar to midline region of the patient's jaw and include the crowding/spacing data related to the cuspid to midline region of the patient's jaw (Andreiko; col. 12, lines 18-32, col. 13, lines 53-68, col. 37, lines 5-18 and Fig. 4);

iii. Computer transforming at least some of the data in the first and second tables to corresponding first and second discrepancies (Andreiko; col. 44, line 63 to col. 45, line 22);

iv. planning an orthodontic treatment based upon the crowding/spacing data entered into the first and second tables and the first and second discrepancies (Andreiko; col. 4, lines 1-9, lines 16-24, line 59 to col. 5, line 23 and Fig. 4, 7).

U. As per claim 31, Andreiko discloses the method of claim 30 further comprising adding midline and molar relationships to a midline chart (Andreiko; col. 42, lines 42-68).

V. As per claim 32, Andreiko discloses the method of claim 30 further comprising adding data related to the planned orthodontic treatment to an anticipated treatment chart (Andreiko; col. 44, line 63 to col. 45, line 22).

W. As per claim 33, Andreiko discloses the method of claim 32 further comprising adding midline and molar relationships to a midline chart (Andreiko; col. 42, lines 42-68).

X. Claim 34 has been amended now to recite the method of claim 30 wherein the transforming of the data in the first and second tables to corresponding first and second discrepancies comprises: summing the crowding/spacing data of the first table to create a first total and entering the first total in the first table as a first discrepancy; and, summing the crowding/spacing data of the second table to create a second total and entering the second total in the second table as a second discrepancy (Andreiko; col. 40, lines 42-64).

Y. As per claim 35, Andreiko discloses the method of claim 30 wherein the crowding/spacing data in the second table includes crowding/spacing data relating to a bicuspid region of the patient's jaw (Andreiko; col. 17, lines 40-59).

Z. As per claim 36, Andreiko discloses the method of claim 30 wherein the crowding/spacing data in the second table includes crowding/spacing data relating to a molar region of the patient's jaw (Andreiko; col. 17, lines 40-59).

AA. As per claim 37, Andreiko discloses the method of claim 30 wherein the crowding/spacing data in the first and second tables includes space required to correct a curve of Spee of the patient's jaw (Andreiko; col. 15, line 53 to col. 16, lines 4).

BB. As per claim 38, Andreiko discloses the method of claim 30 wherein the crowding/spacing data in the first and second tables includes space created and

required to move a midline of teeth in the patient's jaw (Andreiko; col. 4, line 59 to col. 5, lines 23).

CC. As per claim 39, Andreiko discloses the method of claim 30 wherein the crowding/spacing data in the first and second tables includes space required to correct positions of incisors in the patient's jaw (Andreiko; col. 4, line 59 to col. 5, lines 23).

DD. Claim 40 has been amended now to recite the method of claim 30 wherein the transforming of the data in the first and second tables to corresponding first and second discrepancies comprises:

- i. summing the crowding/spacing data of the first table to create a first total and entering the first total in the first table as a first initial discrepancy (Andreiko; col. 37, lines 19-51, col. 39, lines 53-55 and col. 40, lines 42-64);
- ii. summing the crowding/spacing data of the second table to create a second total and entering the second total in the second table as a second initial discrepancy (Andreiko; col. 14, lines 25-35, col. 40, lines 2-18 and col. 40, line 65 to col. 41, lines 15);
- iii. entering other created space in the first and second tables (Andreiko; col. 4, line 59 to col. 5, lines 23);
- iv. summing the first total and the other created space to create a third total and entering the third total in the first table as a first remaining discrepancy (Andreiko; col. 40, lines 42-64); and,

v. summing the second total and the other created space to create a fourth total and entering the fourth total in the second table as a second remaining discrepancy (Andreiko; col. 40, lines 42-64).

EE. Claims 41-44 repeat the same limitations as claims 3-4-5-6 respectively, and therefore are rejected with the same reasons as described above and incorporated herein.

Response to Arguments

14. Applicant's arguments filed 11/16/2007 have been fully considered but they are not persuasive. Applicant's argument will be addressed below in the order in which they appear.

A. In response to Applicant's argument about the new matter rejection, Examiner respectfully submits that claims 22, 23, 30, 34 and 40 are amended in March 9, 2007, after the final rejection dated 1/12/2007, and therefore the Examiner did not enter the amendments and prepared an after final rejection and mailed to the applicant on 03/29/2007. Applicant filed an RCE on 5/22/2007 and included the amendments to the claims 22, 23, 30, 34 and 40. The amendments were entered with this continuing examination. Examiner rejected claims 22, 23, 30, 34 and 40 under 35 U.S.C. 132 (a) because they contain new matter of "transforming the data in the first and second tables to corresponding first and second discrepancies". Applicant argues and points out the specification page 18, line 13 to page 20, line 15 for this limitation and states that some spaces are summed and the sum is entered as in both tables as initial discrepancies, and

some other spaces are also recorded in the tables and these spaces are summed with the initial discrepancy data to produce final discrepancies.

Applicant continues and states “accordingly, one skilled in the art will also easily understand that the summing of the initial discrepancy with the additional spacing data is one form of a transformation of this data from individual spacing data into final discrepancy data that is further recorded in the table (summing of spacing data, of course, but one example of data transformation) (remarks pages 19-20). As the Applicant notices and emphasizes, transforming has a broader meaning than summing, and specification covers only summing the crowding/spacing data, there is no mention of transforming, or any other type of transforming data. Therefore the new matter rejection of these claims remains for this application.

B. In response to Applicant’s argument about 35 U.S.C. § 112 first paragraph rejection for claims 22, 23, 30, 34 and 40 for containing subject that was not described in the application as originally filed, Examiner respectfully submits that transforming and summing the data in a table does not have the same meanings as explained above in the section A. The specification recites “[0043] The chart of FIG. 8 is used to record the patient's initial midline and first molar relationships on the right and left sides...[0044] A chart having 3.times.3 and 7.times.7 tables is illustrated in FIG. 9 and is used to record the lower arch discrepancy. The 3.times.3 chart covers the regions between the right canine and the midline and between the left canine and the midline. The 7.times.7 chart covers the regions between the right second molar and the midline and between the left second

molar and the midline... These discrepancies are totaled and the totals are recorded in both tables as initial discrepancies. [0046] The differences between the total created spaces and the total space requirements are entered into both tables of the chart of FIG. 9 as remaining discrepancies.” Nowhere in the specification has it recited “transforming the data in the first and second tables to corresponding first and second discrepancies”. The specification describes discrepancies are totaled and the totals are recorded as initial and remaining discrepancies. As explained in the section A above that transforming has a broader meaning than summing, and the specification does not mention any other type of transforming data.

C. In response to Applicant’s argument about 35 U.S.C. § 112 second paragraph rejection for claims 22-44, as being unclear to which data in the tables are transformed from the tables and where, Examiner respectfully submits that claims 22 and 30 recite “transforming the data in the first and second tables to corresponding first and second discrepancies” and “computer transforming at least some of the data in the first and second tables to corresponding first and second discrepancies” are not described in the specification as originally filed. As explained above sections A and B, “transforming” has a broader meaning than “summing”. Also, it’s not clear which data is referred as “at least some”. As explained above in the 112 second paragraph rejection, claims 22, 34 and 40 are not clear which data are transformed. Claim 30 is not clear on “planning an orthodontic treatment based upon the crowding/spacing data entered into the first

and second tables and the first and second discrepancies". Applicant submits that "one skilled in the art will easily understand how an orthodontic treatment can be planned based upon the crowding/spacing data and the first and second discrepancies". Therefore there is no transformation of data in the application, some or all data are entered in the chart. And it's not clear in the claims which data should be entered in the chart, since claim 22 recites "entering data from the first and second tables into an anticipated treatment chart" and claim 30 recites "computer transforming at least some of the data in the first and second tables to corresponding first and second discrepancies".

D. In response to Applicant's argument about 35 U.S.C. § 112 second paragraph rejection for claim 30, because it's not clear how the planning process occurs in the claim. Claim 30 recites "planning an orthodontic treatment based upon the crowding/spacing data entered into the first and second tables and the first and second discrepancies". Is the planning to figure out the distance and direction required to move each tooth, or only finding out the existing space between the teeth and the midline. Also, in the following claims, it's disclosed that summing the crowding/spacing data of the first and second tables and then summing these totals, so creating first and second initial discrepancies; entering other created space such as extractions, stripping, expansion and distalizing, then adding these values with the first and second totals to create first and second remaining discrepancies. It is not clear how and for what these

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discrepancies are used. It's not clear what the obtained values are for and how they are to be used.

E. Examiner is withdrawing the 35 U.S.C. § 112 second paragraph rejection about the values are not clear if they are distances or coordinates, and considers that measurement described in claims are distances.

F. In response to Applicant's argument about 35 U.S.C. § 101 rejection of claims 1, 14 and 22; Examiner respectfully submit that according to the decision of *State Street & Trust Bank v. Signature Financial Group Inc.* "...the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces "a useful, concrete and tangible result"--a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades." Claims 1-13 recite computer implemented method of entering different distance information of some teeth of a patient into tables, and entering data from the first and second tables into an anticipated chart. Claims do not recite any tangible and usable result for any one skilled in the art would use, because these claims are only about entering the spacing data into tables and into a chart. There is no transformation of input number to output numbers. Claims 14-21 recite the same limitation and also summing the data entered in the tables, then adding data from the first and second tables to an anticipated chart. There is no machine

programmed to transfer data which represent discrete amount into a final amount. The values in the tables are put by the user using a keyboard or any other input device (specification; par.0062). Transferring the data in the tables to a chart is not done by machine programmed process; these are hand written values as can be seen in figures 1-13. Likewise claims 22-29 and 30-44 recite the values are computer entered in the tables, but this can be done by a dentist using any input device, such as keyboard or can be handwritten as in figures 1-13, therefore there is no machine programmed input data in these claims. And “planning an orthodontic treatment based upon the crowding/spacing data entered into the first and second tables and the first and second discrepancies” does not produce a tangible and useful result, because there is no computer or machine implemented data input and then obtaining an output according to a series of mathematical calculations involved in these claims.

G. In response to Applicant’s argument about Andreiko does not teach a method of entering crowding/spacing data, Examiner respectfully submits that Andreiko teaches “Further, many values are calculated or measured for each tooth I, or for each of a limited group of teeth, as, for example, the mesio-distal width MDW or the mesial and distal extremities M.sub.X,Y and D.sub.X,Y as in the description of step (300) below. Wherever possible, the I designation is also eliminated and the description instead describes how the variables relate to the various teeth. In addition, where some values such as MDW discussed above relate to a tooth dimension or the distance between two points on a tooth (and

may be represented by a scaler value in a computer), other values such as the points $M_{sub.X,Y}$ and $D_{sub.X,Y}$ relate to points M and D, respectively (and may be represented by a pair of X and Y coordinates in a computer). Usually, the subscripts designating the two coordinates are omitted, and where helpful to clarify the description, a single one of the subscripts X or Y may be used, such as with $D_{sub.X}$ or $D_{sub.Y}$, to designate that only the X or Y coordinate is employed, for example, in a calculation.” (Andreiko; col. 12, lines 46-64)

Examiner respectfully submits that entering spacing data into a computer has the same purpose and reason for usage of this data, since the data is obtained for an orthodontic treatment. Therefore the system Andreiko teaches entering the measurements related to teeth and storing the data in the file, Examiner respectfully submits that these data may be stored in tables.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

16. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DILEK B. COBANOGLU whose telephone number is (571)272-8295. The examiner can normally be reached on 8-4:30.

18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on 571-272-6776. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DBC/
Examiner, Art Unit 3626

/C. Luke Gilligan/
Primary Examiner, Art Unit 3626